

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 01-175205

(43)Date of publication of application : 11.07.1989

(51)Int.Cl. H01F 1/04
C22C 38/00

(21)Application number : 62-335441

(71)Applicant : SHIN ETSU CHEM CO LTD

(22)Date of filing : 28.12.1987

(72)Inventor : OHASHI TAKESHI
OSUGI MAKOTO
TAWARA YOSHIO

(54) RARE EARTH PERMANENT MAGNET

(57)Abstract:

PURPOSE: To obtain the excellent magnetic characteristics and a high Curie point, by providing a magnet with composition given by R, M, and Fe, where R are rare earth elements including Y, and M are V, Cr, Mn, etc., at atomic percentage in a specified range, and by providing the main phase with a body-centered teragonal crystal structure.

CONSTITUTION: This rare earth permanent magnet is expressed by an equation $R_xM_yFe_{1-x-y}$ (in the equation, R contains one or more kinds of rare earth element including Y; M contains one or more kinds out of V, Cr, Mn, Si, W, Nb, Mo, Ta, Al, Sn, Zr, Hf, Ge; and x is 5W9 and y is 1W10 atomic percent), and the main phase has a body-centered teragonal crystal structure. The rare earth permanent magnet is made of a ternary alloy of R-M-Fe, and rare earth elements of La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu and Y are given as R. The rare earth permanent magnet is obtained by well-known powder metallurgy, by dissolving, casting, breaking to pieces, molding in a magnetic field, sintering and heat-treating a compound consisting of the above-mentioned elements.

LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office